

POWDER SPRINGS BRIDGE  
Dale Road Spanning Flat Creek  
Powder Springs  
Grainger County  
Tennessee

HAER No. TN-24

HAER  
TENN  
29-POSP,  
1-

PHOTOGRAPHS

WRITTEN HISTORIC AND DESCRIPTIVE DATA

Historic American Engineering Record  
National Park Service  
Southeast Region  
Department of the Interior  
Atlanta, Georgia 30303

HISTORIC AMERICAN ENGINEERING RECORD

POWDER SPRINGS BRIDGE

HAER No. TN-24

HAER  
TENN  
29-POSP,

Location: Dale Road (A051) spanning Flat Creek, 0.06 mile east of State Route 131, Powder Springs community, West Grainger County, Tennessee

U.S.G.S. 7.5 minute Powder Springs (154 SW), Tennessee, quadrangle, Universal Transverse Mercator Coordinates:  
17.260180.4015100

Date of Construction: 1909

Builder: Converse Bridge Company, Chattanooga, Tennessee

Present Owner: Grainger County  
County Courthouse  
Rutledge, Tennessee 37861

Present Use: Vehicular Bridge  
To be demolished 1987

Significance: The Powder Springs Bridge is a representative example of the Pratt half-hip truss and of the work of the Converse Bridge Company of Chattanooga, Tennessee

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Environmental Planning Office  
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505 Deaderick Street  
Nashville, Tennessee 37219

Date: June 1986

The Powder Springs Bridge is located over Flat Creek in western Grainger County near the Union County line and north of the Clinch Mountains. It is located on the edge of the small, rural community of Powder Springs. Built in 1909 by the Converse Bridge Company, the bridge derives its significance from its representative nature as an example of the Pratt half-hip truss and of the work by the Converse Bridge Company.

The Converse Bridge Company was formed around 1890 by William H. Converse. Headquartered in Chattanooga, the firm erected numerous bridges in Tennessee of which several remain. The firm's practice held steady until the Depression when it began to concentrate more on providing structural steel for buildings rather than erecting bridges. The firm was sold in 1957 to the Mississippi Valley Steel Company; it is now owned by the Sisken Steel and Supply Company of Chattanooga.

The Powder Springs Bridge is sixty feet in length and contains two spans, a 15-foot steel I-beam span and a 45-foot pony steel truss. This pony or low truss is a pin-connected Pratt half-hip span which is five feet tall. The connections utilize cotter pins. The curb-to-curb width is 13.8 feet, and the out-to-out width is 16.1 feet. The composition of specific truss members is as follows:

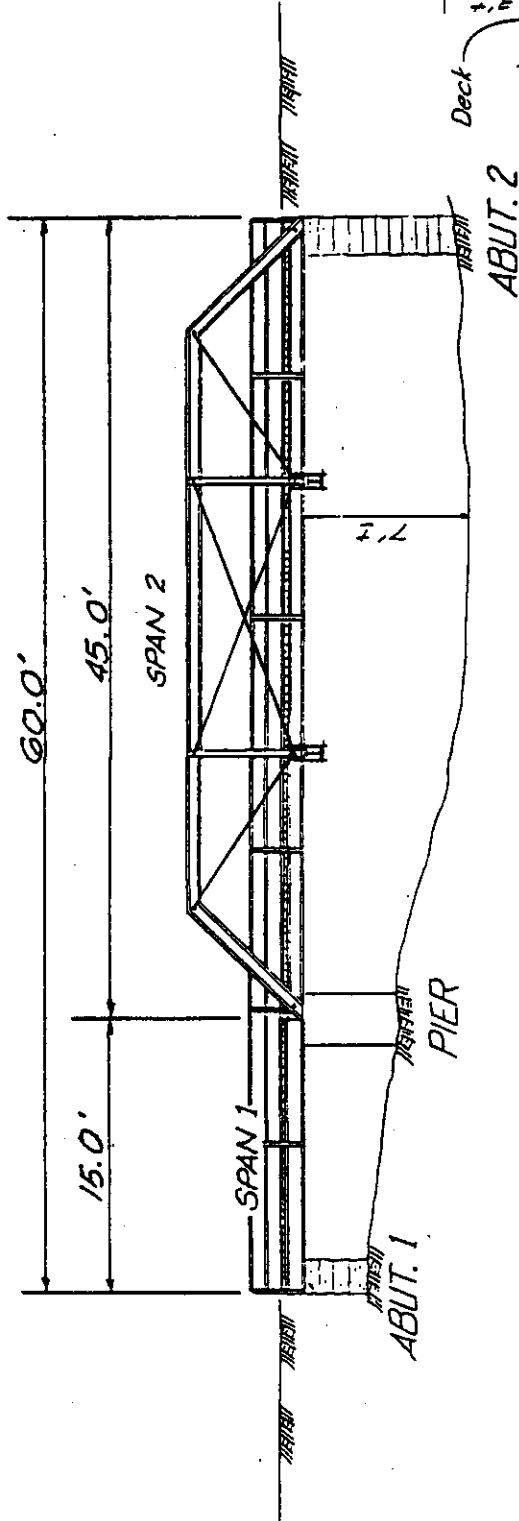
Top Chords:	Channels with battens underneath
End posts:	Channels with battens underneath
Bottom Chords:	Paired rectilinear eyebars
Posts:	Paired angles with cross lacing
Diagonals:	Paired rectilinear eyebars
Counters:	Paired cylindrical tierods

The substructure is composed of concrete, masonry, and steel. Both abutments are of masonry construction; however, a portion of the western abutment (abutment one) has been replaced with concrete. The pier is composed of two steel encased concrete tubular cylinders connected with crossed (X) tierods.

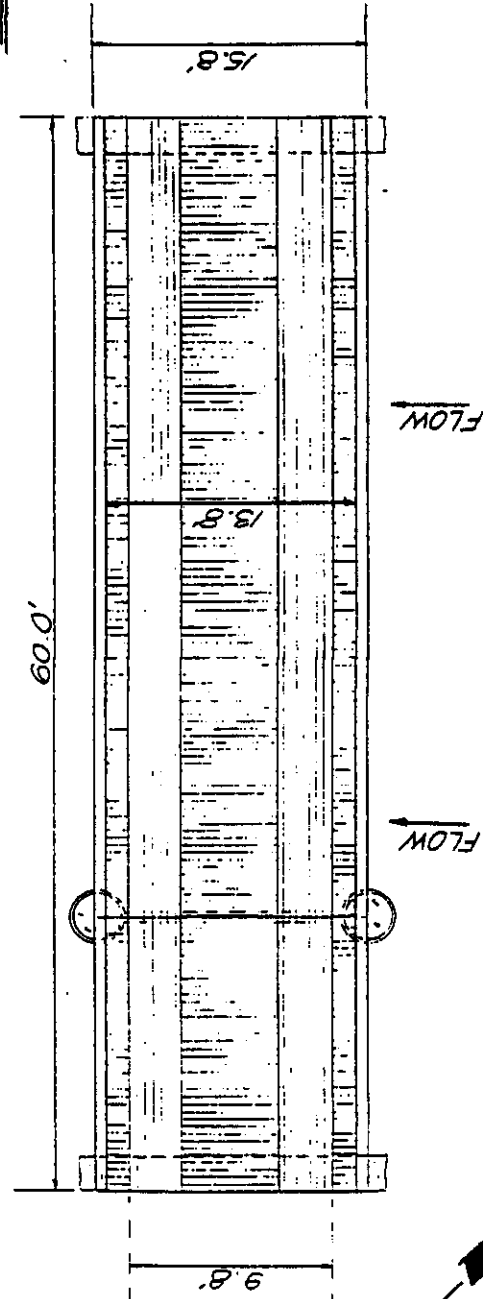
BIBLIOGRAPHICAL REFERENCES:

Chattanooga City Directories 1880-1930  
Chattanooga Times, 4, 9 November 1945,  
30 June 1957.  
Pen and Sunlight Sketches of Chattanooga  
N. P.: American Illustrating Company,  
N.D. (circa 1910).

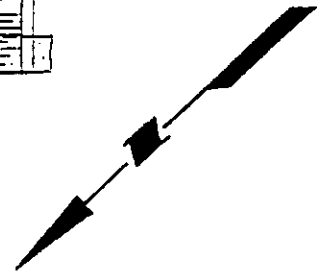
BRIDGE LAYOUT  
Br. No. 29 - A051 - 006  
GRAINGER COUNTY

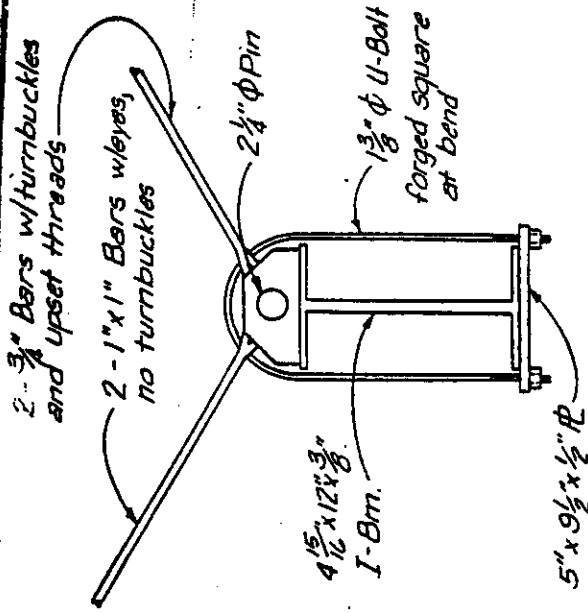


ELEVATION

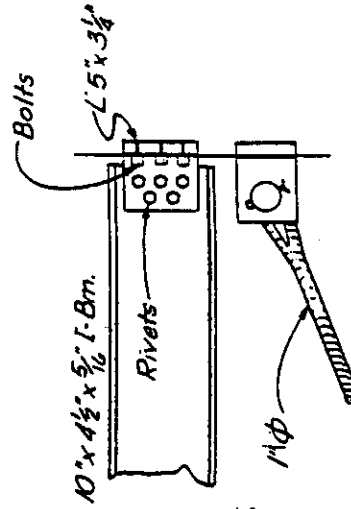


PLAN

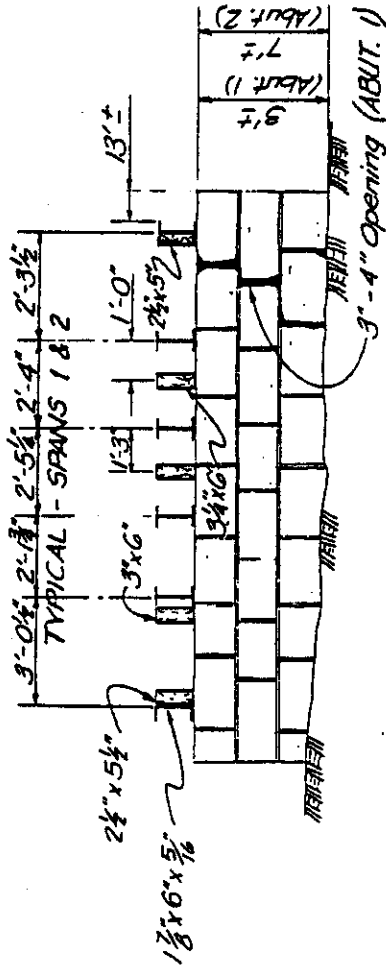




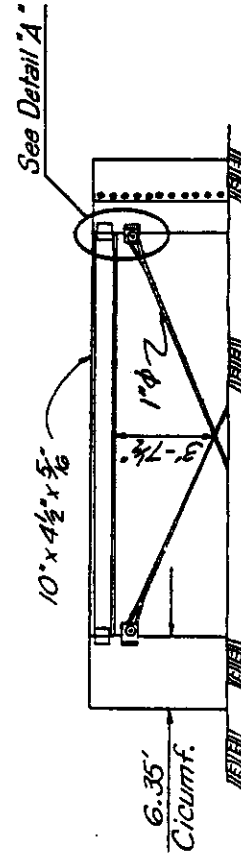
BOTTOM CHORD CONNECTION



DETAIL "A"

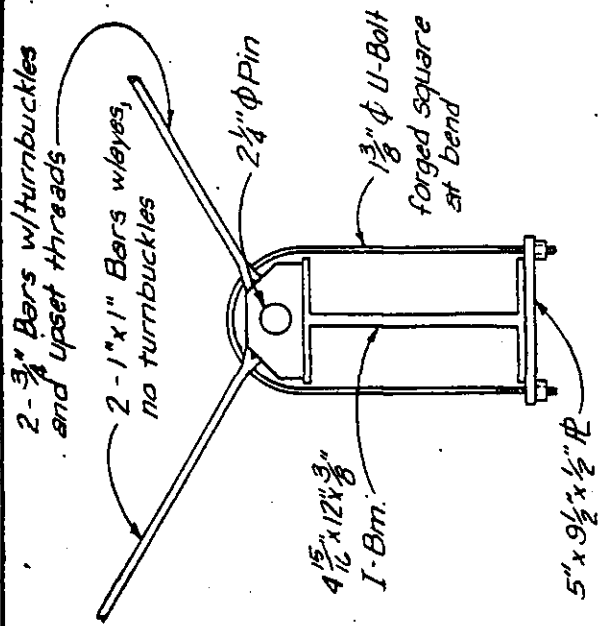


ABUT. & STRINGER SECTION

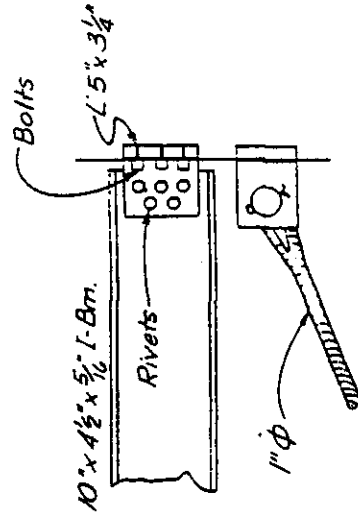


PIER

TYPICAL SECTION  
Br. No. 29 - 4051 - 006  
GRAINGER COUNTY

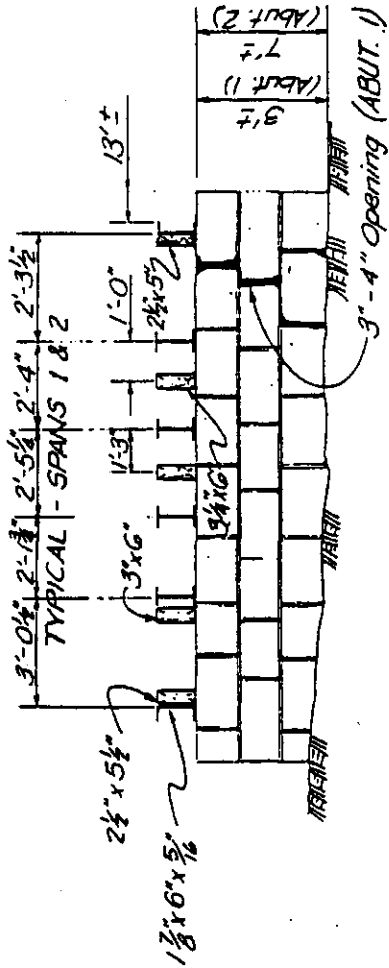


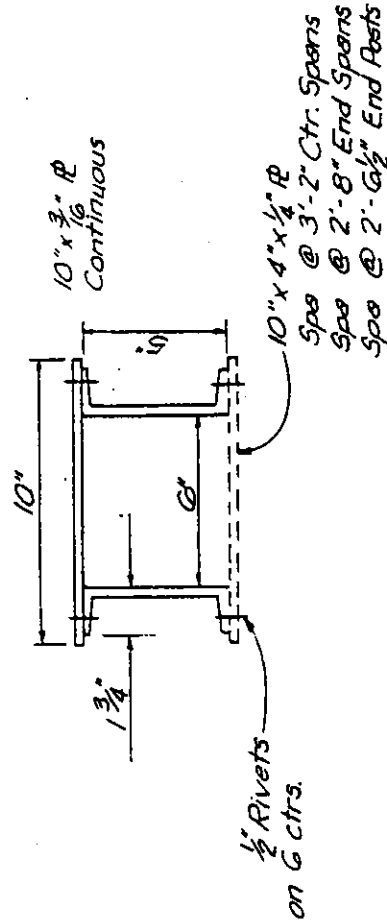
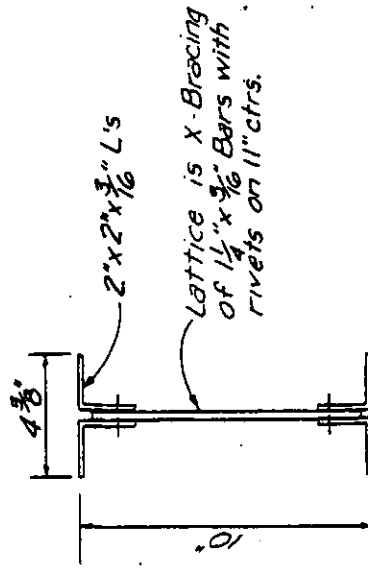
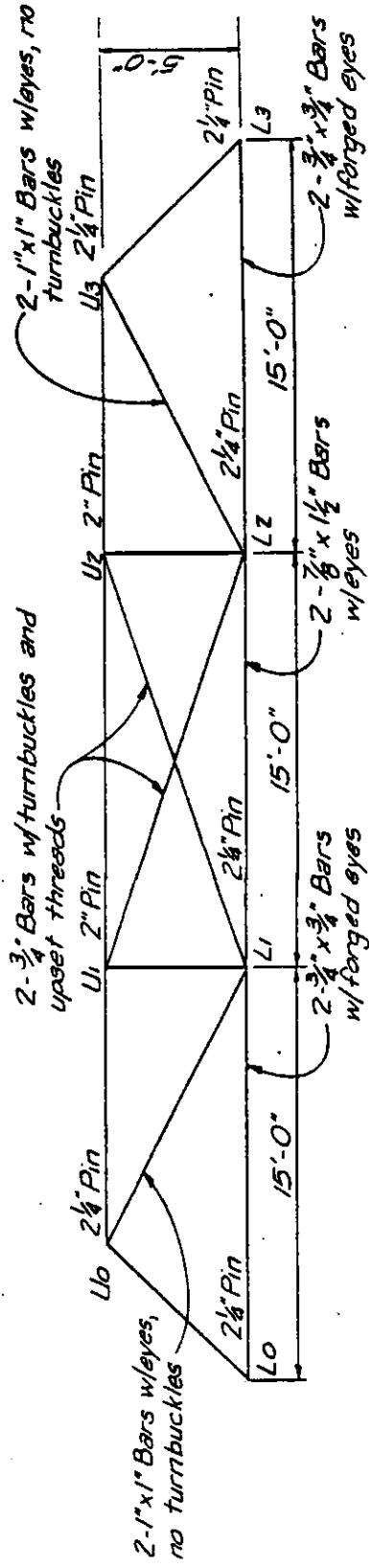
BOTTOM CHORD CONNECTION



DETAIL "A"

TYPICAL SECTION  
Br. No. 29- A051 -006  
GRAINGER COUNTY





TYP. VERTICAL POST SECTION

TYP. TOP CHORDS & END POST SECTION

TRUSS DETAILS  
Br. N. 29- AOSI -0.06  
GRAINGER COUNTY